

In the Specification

Please replace the paragraph beginning on page 5, line 9 with the following amended paragraph:

~~FIG. 5 illustrates~~ FIGS. 5A-5B illustrate a table comparing one embodiment of the present invention to conventional air pipettes;

Please replace the paragraph beginning on page 5, line 19 with the following amended paragraph:

~~FIG. 9 illustrates~~ FIGS. 9A-9B illustrate the dispensing precision in Differential Mode compared to Bulk Mode in a large internal air space pipette;

Please replace the paragraph beginning on page 5, line 26 with the following amended paragraph:

~~FIG. 13 illustrates~~ FIGS. 13A-13B illustrate a working module to help facilitate the placement and movement of the pipette.

Please replace the paragraph beginning on page 7, line 14 with the following amended paragraph:

The volume of the chamber 80 may be varied by movement of the channel 40 with respect to the piston 20 and the cylinder 60. Alternatively, the volume of the chamber 80 may be varied by movement of the piston 20 and the channel 40 with respect to the cylinder 60. Movement of the piston ~~[[40]]~~ 20 and the channel 40 relative to the cylinder 60 alters the volume in the second portion 84 of the chamber 80, while movement of the of the channel 40 relative to the piston 20 and cylinder 60 alters the volume of the first portion 82 and the third portion 83 of the chamber 80.

Please replace the paragraph beginning on page 11, line 13 with the following amended paragraph:

Fig. 4A shows a cross-sectional view of one embodiment of the present invention in the “Home position” or the top of the Differential Mode. The middle assembly 206 is at the top, positioned up against the bottom of the top plate ~~[[205]]~~ 212. The helical springs 256 are in full extension holding the top assembly 205 up.

Please replace the paragraph beginning on page 11, line 17 with the following amended paragraph:

In Fig. 4B the middle assembly 206 moves down to a position determined by the volume of the fluid sample one intends to aspirate. This illustrates the start of the differential aspiration. The middle assembly 206 is positioned such that at the end of aspiration, the middle assembly will be positioned close to the transition level between Differential and Bulk Mode. Fig. 4B shows the start position for aspirating a 100 nanoliter sample in Differential Mode, which corresponds to positioning the middle assembly such that the hanging ledge 250 is spaced from the ledge gripper 252 by 0.007” as illustrated as dimension A.

Please replace the paragraph beginning on page 16, line 4 with the following amended paragraph:

Fig. 10 further illustrates the extension mandrel filler 410, which may be removably secured to, or part of the main body portion of the pipette 400. As shown in Fig. 10.1, the extension mandrel 410 has a cross-sectional area that is less than the cross-sectional area of the main body portion of the pipette 400. When a disposable pipette tip is secured to the end of the pipette, this reduction in cross-sectional area enables the extension mandrel 410 to fill a volume within the pipette tip 430 that the main body portion of the pipette 400 alone would not be capable of filling. In other words, the extension mandrel 410 functions to reduce the volume of air that occupies the pipette tip 430. In the embodiment of Fig. ~~[[12]]~~ 10, the extension mandrel 410 reduces the volume within the pipette tip from 280 microliters to only 20 microliters. As

explained above, in an air-filled pipette system, a reduction in the air within the pipette and pipette tip decreases the measurement error associated with density changes in the air. In one embodiment that features an extension mandrel 410, the main body portion of the pipette 400 transitions to the extension mandrel in a step arrangement, however, other configurations, such as a sloped transition, are contemplated.